

THE HONEYSUCKLE FAMILY IN OHIO.

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CAPRIFOLIACEAE. Honeysuckle Family.

Shrubs, trees, or perennial herbs with opposite leaves, with or without stipules; flowers axillary or terminal, sympetalous, usually pentamerous except the gynecium, epigynous, actinomorphic or zygomorphic, often 2-lipped, stamens united with the corolla, alternating with its lobes; ovulary 1-6-locular; styles slender, ovules anatropous; fruit a berry, drupe, or capsule; seeds oblong, globose, or angular; embryo rather small situated near the hilum; endosperm fleshy.

Synopsis.

- I. Style deeply 5-2-lobed; corolla rotate.
 1. Ovulary 5-3-locular; drupe 5-3-seeded; leaves pinnate. *Sambucus*.
 2. Ovulary 3-1-locular; drupe 1-seeded; leaves simple. *Viburnum*.
- II. Style single, slender; corolla more or less tubular.
 1. Stigma 5-3-lobed; ovulary 5-3-locular, ovules one in each cavity. *Triosteum*.
 2. Stigma capitate or nearly so; ovulary 3-2-locular, ovules several to many in each cavity, or at least several in some cavities.
 - a. Fruit a berry.
 - (a). Ovulary with four cavities; corolla campanulate. *Symphoricarpos*.
 - (b). Ovulary with 3-2 cavities; corolla short or long tubular.
 - (1). Stamens 5; fruit fleshy. *Lonicera*.
 - (2). Stamens 4; fruit dry. *Linnæa*.
 - b. Fruit a capsule. *Diervilla*.

Key to the Genera.

1. Leaves simple. 2.
1. Leaves compound, pinnate. *Sambucus*.
2. Woody shrubs or vines. 3.
2. Herbs with sessile axillary flowers; leaves connate or sessile, glandular, pubescent, perennial. *Triosteum*.
2. Trailing somewhat woody plants with evergreen leaves; flowers on long peduncles, geminate; fruit tri-locular but one-seeded. *Linnæa*.
3. Flowers with rotate corolla; inflorescence cymose. *Viburnum*.
3. Flowers with tubular to campanulate corollas; inflorescence a terminal spike or in axillary clusters. 4.
4. Leaves entire or nearly so. 5.
4. Leaves serrate, long-acuminate; ovulary elongated; stems ridged laterally; corolla funnelformed, calyx tube long, slender. *Diervilla*.
5. Corolla almost actinomorphic, short, more or less campanulate; leaves normally entire; fruit a 4-locular 2-seeded berry. *Symphoricarpos*.
5. Corolla zygomorphic, 2-lipped, tubular; fruit a several seeded berry *Lonicera*.

Sambucus L. Elderberry.

Shrubs or small trees with opposite pinnate leaves often with stipules and stipules; leaflets serrate, acuminate; flowers white or pinkish-white, actinomorphic, bisporangiate; trimerous to pentamerous, corolla rotate or campanulate; calyx tube ovoid or turbinate; stamens five united with the base of the corolla, filaments slender, anthers long; inflorescence a compound or depressed cyme; ovulary tri-locular to quinque-locular; ovules one in each cavity, pendulous; fruit a berry-like drupe containing 3 to 5 one-seeded nutlets; embryo long.

Key to the Species.

1. Leaflets glabrous above, sometimes pubescent beneath, 5 to 11, ovate or oval; pith large, white; cyme convex. *S. canadensis*.
1. Leaflets and twigs commonly pubescent, 5 to 7; pith in the young branches a reddish brown; inflorescence a compact panniculate cyme. *S. racemosa*.

1. **Sambucus canadensis L.** Common Elderberry. A shrub 2 to 13 feet high; stem often but slightly woody, containing a large soft white pith when young; leaflets 5 to 11; ovate to obovate, acuminate or acute, short petioled, glabrous above more or less pubescent along the mid-rib beneath, 2 to 5 inches long, $\frac{3}{4}$ to 2 inches broad, serrate; cymes broad, flat convex; flowers white $\frac{1}{8}$ to $\frac{1}{4}$ inches broad; drupe $\frac{1}{4}$ inch in diameter, purplish black; nutlets roughened. In moist soil. General.

2. **Sambucus racemosa L.** Red Elderberry. A shrub 2 to 13 feet high; twigs and leaves more or less pubescent; stems woody with a reddish brown pith; leaflets 5 to 7; ovate to oblanceolate, acuminate, unequalateral, $1\frac{1}{4}$ to 5 inches long, $\frac{1}{2}$ to $1\frac{1}{2}$ inches broad, sharply serrate; cymes elongated, flowers white turning brown; drupe red, $\frac{3}{8}$ to $\frac{1}{2}$ inch in diameter; nutlets slightly roughened. In rocky places. General.

Viburnum L.

Shrub or trees with entire or lobed simple, sometimes stipulate leaves; flowers white or sometimes slightly pink, actinomorphic; corolla rotate or campanulate; calyx tube ovoid or turbinate; stamens five, anthers long exerted; inflorescence a compound cyme; outer flowers sometimes radiant and sterile; ovulary 1-3-locular; style short; three cleft; fruit an ovoid drupe, sometimes flattened, one seeded; seed compressed; embryo minute.

Key to the Species.

1. Leaves palmately veined, 3-lobed, the two lateral veins prominent. 2.
1. Leaves pinnately veined, not 3-lobed, lateral veins 5-11. 3.
2. Leaves glabrous above, pubescent along the veins beneath; outer flowers of the cyme enlarged and flat. *V. opulus*.
2. Leaves more or less pubescent on both sides; cymes not radiant.

V. acerifolium.

3. Outer flowers of the cyme large and flat. *V. alnifolium*.
3. Outer flowers not enlarged. 4.
4. Leaves coarsely dentate. 5.
4. Leaves serrate or denticulate. 7.
5. Leaves sessile or the petioles not exceeding $\frac{1}{4}$ inch; oval to ovate, acuminate, pubescent; stipules long, slender, prominent. *V. pubescens*.
5. Leaves with petioles $\frac{1}{4}$ to $1\frac{1}{2}$ inches long, broadly oval, obtuse to long acute. 6.
6. Leaves pubescent beneath, more or less stellate; cyme pubescent. *V. scabrellum*.
6. Leaves glabrous beneath sometimes with tufts of hair in the axils; cyme glabrous or nearly so. *V. dentatum*.
7. Leaves very pubescent, denticulate, cyme stalked. *V. lantana*.
7. Leaves glabrous or nearly so, serrate or crenulate. 8.
8. Leaves ovate-lanceolate, usually crenulate; petioles rather stout; peduncles about the length of the cyme or shorter. *V. cassinoides*.
8. Leaves ovate or broadly oval, margin serrate; petioles slender; cyme sessile or nearly so. 9.
9. Leaves long-acuminate; petioles often wavy margined. *V. lentago*.
9. Leaves obtuse or sometimes acute, oval; petioles rarely margined. *V. prunifolium*.

1. **Viburnum pubescens** (Ait) Prush. Downy Arrow-wood. A shrub 18 to 46 feet high with straight gray branches; leaves ovate or obovate, acute or acuminate, rounded or somewhat cordate at the base, sessile or short petioled, margin dentate, upper surface sparsely pubescent, under surface velvety pubescent, $1\frac{1}{2}$ to $2\frac{3}{4}$ inches long, $\frac{3}{8}$ to $1\frac{1}{2}$ inches broad; cyme peduncled, $1\frac{1}{2}$ to $2\frac{1}{2}$ inches broad, all flowers bisporangiate; fruit an oval drupe about $2\frac{1}{2}$ inches long; stone somewhat 2-grooved on both sides. In rocky woods. Lorain, Erie, Wyandot, Auglaize, Williams.

2. **Viburnum dentatum** L. Toothed Arrow-wood. A shrub about 15 feet high with glabrous branches; leaves $1\frac{1}{2}$ to $4\frac{1}{4}$ inches long, 1 to 3 inches wide, ovate to broad ovate or orbicular, base rounded or somewhat cordate, acute or short acuminate, petioles $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, veins prominent, margin coarsely dentate, both surfaces glabrous except a slight pubescence in the axils on the under surface; cymes with long peduncles, 2 to 3 inches broad. In moist soil. Ashtabula, Geauga, Lorain, Summit, Stark, Wayne, Ashland, Tuscarawas.

3. **Viburnum scabrellum** (T & G) Chapm. Roughleaf Arrow-wood. A shrub with more or less densely tomentose twigs; leaves $1\frac{1}{2}$ to 5 inches long; $\frac{1}{2}$ to $3\frac{3}{4}$ inches broad, usually tomentose on both sides, crenate or dentate; petioles short and stout; fruit an ovoid, globose, blue drupe. Along river banks and in moist woods. Adams, Brown, Hocking, Madison.

4. **Viburnum cassinoides** L. Withe-rod. A shrub 2 to 12 feet high with ascending branches, more or less gray, often scurfy or glabrate; leaves ovate to obovate, thick, base often narrowed but sometimes rounded, apex acute, margin crenulate, $\frac{3}{4}$ to $3\frac{1}{4}$

inches long, $\frac{1}{2}$ to $1\frac{3}{4}$ inches wide, both surfaces glabrous or nearly so; penduncle shorter or somewhat shorter than the cyme; fruit a pink drupe which turns dark blue, globose to ovoid, $\frac{3}{8}$ to $\frac{1}{2}$ inch long; stone rounded or oval flattened. In swamps and moist places. Ashtabula, Cuyahoga, Geauga, Lorain, Summit, Hocking.

5. **Viburnum lentago** L. Sheepberry. A shrub or small tree; leaves lanceolate to oblanceolate and oval, acuminate, rounded at the base, sharply serrulate, glabrous or only slightly pubescent beneath, 2 to 4 inches long, $\frac{1}{2}$ to 2 inches wide; petioles widened often with a wavy margin; cyme several-rayed, 2 to 5 inches broad; fruit an oval bluish-black drupe with a bloom, $\frac{1}{2}$ to $\frac{3}{4}$ inches long, stone flattened, circular or oval. In rich fields and woods. Rather general.

6. **Viburnum prunifolium** L. Black Haw. A shrub or small tree with reddish-brown pubescence, rather small flattened winter buds; leaves ovate to broad obovate, obtuse to somewhat acute, finely serrulate, usually glabrous, $\frac{3}{4}$ to $3\frac{1}{4}$ inches long, $\frac{1}{2}$ to 2 inches wide; petioles usually not margined; cyme several-rayed, 2 to 4 inches broad; fruit a bluish-black glaucous drupe, $\frac{3}{8}$ to $\frac{3}{4}$ inches long; stone flattened on one side, somewhat convex on the other, ovoid. In dry field and along roadsides. General.

7. **Viburnum lantana** L. Wayfaring-tree. A shrub about 12 feet high; branches densely stellate pubescent; leaves $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long, $\frac{3}{4}$ to 2 inches wide, ovate, serrulate, upper surface dark green, glabrous or only slightly pubescent, lower surface lighter, more or less stellate pubescent beneath, base subcordate; petioles short and stout; cyme short peduncled, many flowered. Escaped in Lake County.

8. **Viburnum acerifolium** L. Mapleleaf Arrow-wood. A shrub 3 to 6 feet high with smooth gray branches and pubescent twigs; leaves ovate, deeply 3-lobed, $2\frac{1}{2}$ to $4\frac{1}{2}$ inches long, $2\frac{1}{4}$ to 4 inches wide, lobes acute or acuminate, orbicular, base cordate or somewhat truncate, both sides pubescent when young later becoming glabrate, coarsely dentate; petioles $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, pubescent; cymes with long peduncles, $1\frac{1}{2}$ to 3 inches broad; flowers all bisporangiate, $\frac{1}{8}$ to $\frac{1}{4}$ inch broad; fruit an oval nearly black drupe about $\frac{1}{2}$ inch long; stone lenticular, slightly two-ridged on one side, two-grooved on the other side. In dry woods. General.

9. **Viburnum opulus** L. Cranberry-tree. A shrub sometimes reaching 12 feet in height; branches smooth; leaves broadly ovate, glabrous above, more or less pubescent along the veins beneath, deeply three-lobed, $2\frac{1}{4}$ to $3\frac{1}{2}$ inches long, $1\frac{1}{2}$ to $3\frac{1}{2}$ inches wide, the lobes acuminate, base truncate or cordate, 3-ribbed; margin coarsely dentate; petioles $\frac{1}{2}$ to $2\frac{1}{4}$ inches long; cyme with sterile outer flowers, large, radiant, peduncled, $3\frac{1}{2}$ to 4 inches

broad; fruit a red globose or oval drupe $\frac{3}{8}$ to $\frac{1}{2}$ inch in diameter, very acid, translucent; stone not grooved, flat, orbicular. Low fields and woods. Lake, Geauga, Champaign.

10. **Viburnum alnifolium** Marsh. Hobblebush. A shrub with smooth purplish bark, branches often procumbent, irregular and wide spreading; young twigs often scurfy; leaves orbicular or very broadly ovate, apex short acuminate or acute, base usually cordate, upper surface usually becoming glabrous, lower covered with a stellate pubescence especially along the veins, margin finely serrate, $1\frac{1}{4}$ to $2\frac{1}{2}$ inches broad, $1\frac{1}{2}$ to 3 inches long, petioles $\frac{1}{2}$ to $1\frac{1}{2}$ inches long; cymes sessile, $3\frac{1}{2}$ to $5\frac{1}{2}$ inches broad, outer flowers large usually about one inch in diameter; fruit a red drupe, becoming purple, oblong, $\frac{1}{2}$ to $1\frac{1}{4}$ inches long; stone three-grooved on one side, one-grooved on the other. In low woods. Ashtabula and Lake Counties.

Symphoricarpos [Dill.] Ludw.

Shrubs with opposite branches; leaves mostly entire, simple, short petioled, flowers mostly white or pink, bisporangiate, usually somewhat zygomorphic, tetracyclic or pentacyclic; corolla campanulate or salverform, often somewhat lipped, and gibbous at the base; calyx nearly globular; stamens as many as the corolla lobes; inflorescence axillary or in terminal clusters; ovulary 4-locular, two cavities containing vestigial ovules, the other two each containing a single suspended ovule; style slender; fruit a 2-seeded berry; seeds oblong with a small embryo.

Key to the Species.

1. Leaves usually glabrous, sometimes slightly pubescent beneath; flowers in few-flowered axillary and terminal clusters; style glabrous; berries snow white. *S. racemosus*.
1. Leaves glabrous above, usually soft pubescent beneath; flowers in dense axillary clusters; style bearded; berries purplish red.

S. symphoricarpos.

1. **Symphoricarpos racemosus** Mx. Snowberry. An erect almost glabrous shrub; leaves oval, obtuse at both ends, glabrous above, sometimes slightly pubescent beneath, $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, $\frac{1}{2}$ to $1\frac{1}{2}$ inches wide, margin entire, wavy, or slightly dentate when young; petioles $\frac{1}{4}$ inch long; flower clusters terminal and axillary, the terminal one irregularly spicate; corolla campanulate, base gibbous, bearded within, style glabrous; fruit a white globose berry about $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter. In waste places and along river banks. Rather general.

2. **Symphoricarpos symphoricarpos** (L.) MacM. Coral-berry. A shrub 1 to 5 feet in height with purplish usually pubescent twigs; leaves oval to ovate, entire or undulate, glabrous above, usually soft pubescent beneath, $\frac{1}{2}$ to $1\frac{3}{4}$ inches long, $\frac{1}{2}$ to 1 inch

wide; petioles $\frac{1}{8}$ to $\frac{1}{4}$ inch long; flower cluster dense, many flowered becoming spicate; corolla campanulate, pink, somewhat pubescent within, about $\frac{1}{4}$ inch in length; stamens included; fruit a purplish-red globose berry $\frac{1}{8}$ to $\frac{1}{4}$ inch in diameter. In rocky fields and along river banks. General.

Lonicera L. Honeysuckle.

Erect shrubs or woody climbing vines with oval or ovate, usually entire leaves; flowers often in pairs, spicate, or clustered, bisporangiate, pentamerous, usually zygomorphic; corolla commonly gibbous at the base, somewhat 2-lipped; ovary 2-3-locular, sometimes 1-locular; ovules many, pendulous; style slender, stigma sometimes capitate; fruit a fleshy berry; embryo terete.

Key to the Species.

1. All the leaves distinct, flowers in pairs on axillary peduncles. 2.
1. Upper leaves connate-perfoliate, flowers in heads or interrupted spikes. 6
2. Shrubs, not twining; cluster small with small, linear to subulate bracts; flowers small, $\frac{3}{8}$ to $\frac{3}{4}$ inch long. 3.
2. Twining vines; flowers large, $1\frac{1}{4}$ to $1\frac{3}{4}$ inches long, white or pink fading to yellow. *L. japonica*.
3. Corolla almost actinomorphic; twigs glabrous; leaves green on both sides. 4.
3. Corolla zygomorphic, more or less 2-lipped; twigs pubescent when young, sometimes becoming glabrous when mature; leaves pale green, lighter beneath than above. 5.
4. Leaves not ciliate; bracts linear; corolla with wide spreading lobes about as long as the tube, white to rose colored. *L. tartarica*.
4. Leaves strongly ciliate; bracts small subulate; corolla lobes shorter than the tube, greenish yellow. *L. canadensis*.
5. Leaves glabrous or nearly so when mature, not ciliate; peduncles $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, slender. *L. oblongifolia*.
5. Leaves persistently pubescent beneath, ciliate; peduncles $\frac{1}{4}$ to $\frac{1}{2}$ inch long. *L. xylosteum*.
6. Corolla tubular, nearly regular, glabrous; leaves dark green above, slightly glaucous beneath; stamens and style little exserted. *L. sempervirens*.
6. Corolla 2-lipped; upper lip consisting of four lobes. 7.
7. Corolla glabrous within; terminal cluster sessile. *L. caprifolium*.
7. Corolla pubescent within; flower cluster more or less stalked. 8.
8. Leaves pubescent on both sides, very strongly so beneath, only slightly glaucous. *L. hirsuta*.
8. Leaves glabrous on both sides or only slightly pubescent beneath; very glaucous. 9.
9. Leaves glabrous above but pubescent beneath especially along the veins; corolla strongly gibbous at the base. *L. glaucescens*.
9. Leaves glabrous on both sides; corolla tube somewhat gibbous. 10.
10. Corolla tube not much exceeding $\frac{1}{4}$ inch in length; uppermost leaf-disks oblong. *L. dioica*.
10. Corolla tube usually $\frac{1}{2}$ inch long; uppermost leaf-disks orbicular. *L. sullivantii*.

1. **Lonicera canadensis** Marsh. American Fly Honeysuckle. A shrub 3 to 5 feet high with glabrous twigs; leaves ovate to obovate, acute, base rounded or somewhat cordate, upper surface glabrous, under surface soft pubescent when young becoming glabrous when mature, $1\frac{1}{4}$ to $3\frac{1}{2}$ inches long, $1\frac{1}{2}$ to 2 inches wide, margins ciliate; petioles slender, $\frac{1}{4}$ to $\frac{3}{8}$ inch long, flowers in axillary pairs, yellowish green, about $\frac{3}{4}$ inch long, with small subulate bracts, actinomorphic; corolla lobes short; fruit a scarlet ovoid berry about $\frac{1}{4}$ inch thick. In moist shady places. Lake, Summit, Cuyahoga, Lorain.

2. **Lonicera oblongifolia** (Goldie) Hook. Swamp Fly Honeysuckle. A shrub with grayish branches; leaves ovate, acute, sometimes rounded, nearly glabrous when mature, downy pubescent when young, margin ciliate; flowers in pairs, axillary, yellow with purple tints within, $\frac{1}{2}$ to $\frac{3}{4}$ inches long, gibbous at the base, zygomorphic, bracts very small or wanting; ovaries distinct or sometimes united; fruit a red berry. In wet places and swamps. Cuyahoga County.

3. **Lonicera tartarica** L. Tartarian Honeysuckle. A shrub with glabrous grayish branches, 5 to 10 feet high; leaves 1 to $2\frac{3}{4}$ inches long, $\frac{1}{2}$ to $1\frac{3}{8}$ inches wide, thin, ovate, acute, base truncate or cordate, not ciliate, flowers in pairs, axillary; corolla pink or white $\frac{1}{2}$ to $\frac{3}{4}$ inch long, gibbous at the base, deeply five parted, somewhat 2-lipped; peduncles $\frac{1}{2}$ to $1\frac{1}{2}$ inches long; bracts linear, rather long; stamens and style somewhat exserted; fruit of separate berries. Along roadsides and meadows; mostly escaped from cultivation. Ashtabula, Lake, Cuyahoga, Lorain, Licking, Franklin, Auglaize.

4. **Lonicera xylosteum** L. European Fly Honeysuckle. A shrub 3 to 7 feet high with pubescent twigs; leaves ovate to obovate upper ones acute, lower ones sometimes rounded or obtuse at the base, margin entire, $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, $\frac{3}{8}$ to $\frac{3}{4}$ inch wide, densely pubescent on both sides when young, and beneath when mature; petioles short, pubescent; flowers axillary with peduncles about as long as the flowers, $\frac{1}{3}$ to $\frac{2}{3}$ inch long, yellowish white, bracts linear-subulate; fruit a scarlet berry. In fields and along roadsides where it has escaped from cultivation. Lake County.

5. **Lonicera japonica** Thunb. Japanese Honeysuckle. A climbing or trailing vine; leaves ovate, acute with rounded base, glabrous above, somewhat pubescent beneath, 1 to 3 inches long, $\frac{1}{2}$ to $1\frac{1}{2}$ inches wide, margin entire; flowers axillary in pairs at the ends of the vines; bracts large and leaf-like; peduncles $\frac{1}{2}$ to $\frac{3}{4}$ inch long, white or pink fading to yellow, pubescent without, 2-lipped; stamens and style exserted; fruit a black berry $\frac{1}{4}$ to $\frac{1}{3}$ inch in diameter. Escaped from cultivation. Adams, Brown, Auglaize.

6. **Lonicera sempervirens** L. Trumpet Honeysuckle. A glabrous high climbing vine; leaves oval, obtuse, $\frac{1}{2}$ to 2 inches long, 1 to $1\frac{1}{2}$ inches wide, lower ones somewhat smaller, sessile, and more ovate than the upper connate-perfoliate ones, upper surface dark green, glaucous, lower surface sometimes rather pubescent; inflorescence a terminal interrupted verticillate spike; corolla scarlet or yellow, usually glabrous sometimes slightly pubescent, 1 to $1\frac{1}{2}$ inches long, its tube narrow, somewhat expanded above the stamens; stamens and style little exserted; fruit a scarlet berry about $\frac{1}{4}$ inch in diameter. In moist fields or on hillsides. Cuyahoga County.

7. **Lonicera caprifolium** L. Italian Honeysuckle. A high-climbing glabrous or glaucous vine; leaves oval to obovate, rounded, the entire upper ones connate-perfoliate, the lower ones sessile or nearly so, glaucous beneath; flowers in terminal sessile clusters; corolla glabrous and white within, purple without, 1 to $1\frac{1}{2}$ inches long, 2-lipped, upper lip 4-lobed, lower one narrow, reflexed; corolla tube curved; stamens and style much exserted; fruit a red berry. In thickets. No specimens.

8. **Lonicera hirsuta** Eaton. Hairy Honeysuckle. A hairy-pubescent, long, climbing vine; leaves $1\frac{1}{2}$ to 4 inches long, $\frac{1}{2}$ to $1\frac{1}{2}$ inch wide; lower ones sessile or very short petioled, the upper pairs larger and connate-perfoliate, dark green and appressed-pubescent above, lighter and soft-pubescent beneath, ciliate, obtusish, base rounded or somewhat cordate or narrowed; flowers verticillate in terminal interrupted spikes; corolla orange-yellow turning reddish, clammy pubescent without, 2-lipped, slightly gibbous, narrow; filaments hirsute below; stamens and filaments exserted. In swamps, woods, and copses. Ottawa, Lorain, Monroe.

9. **Lonicera glaucescens** Rydb. Glaucous Honeysuckle. A vine with glabrous branches; leaves dark green and glabrous above, lighter and pubescent beneath especially along the veins, $1\frac{1}{2}$ to 5 inches long, 1 to 3 inches wide, upper pair perfoliate, forming a rhombic disk, obtuse or acute, margin entire, papery; verticillate flowers in terminal interrupted spikes; corolla pale yellow changing to a reddish color, usually pubescent without and within; tube one inch long, gibbous, 2-lipped; stamens nearly glabrous, exserted; ovary sometimes hirsute. In fields, meadows and woods. General.

10. **Lonicera sullivanii** Gr. Sullivan's Honeysuckle. A very glaucous vine; leaves $1\frac{1}{2}$ to 3 inches long, $\frac{3}{4}$ to $2\frac{1}{2}$ inches wide, ovate to obovate, upper surface dark green and glaucous, lower lighter and slightly pubescent, obtuse; inflorescence a terminal cluster; corolla pale yellow, tube $\frac{1}{2}$ to $\frac{3}{4}$ inch long, 2-lipped,

slightly gibbous; fruit a yellow berry about $\frac{1}{4}$ inch in diameter. In woods. Stark, Muskingum, Franklin, Madison, Clark, Highland.

11. **Lonicera dioica** L. Smoothleaf Honeysuckle. A trailing or shrubby plant 3 to 10 feet high; leaves oval to obovate, $1\frac{1}{2}$ to 3 inches long, $\frac{3}{4}$ to $1\frac{1}{4}$ inches wide, usually glaucous beneath, upper pair connate-perfoliate, lower ones sessile, obtuse, base truncate or cordate; inflorescence a terminal cluster; corolla yellowish green tinged with purple, gibbous, 2-lipped, glabrous without, pubescent within, tube $\frac{1}{4}$ to $\frac{1}{3}$ inch long, stamens and style exserted; fruit a red berry $\frac{1}{4}$ to $\frac{1}{3}$ inch in diameter. In dry rocky fields and along roadsides. Champaign, Franklin.

Triosteum L. Horse-gentian.

Perennial herbs with simple, terete, pubescent stems; leaves opposite, perfoliate or sessile, ovate, oblong, or oblanceolate, constricted below the middle, usually pubescent; flowers solitary or in clusters, bisporangiate, 2-bracted, sessile; corolla yellowish, green, or purple, tube narrow, gibbous at the base, campanulate; calyx lobes elongated, linear-lanceolate, leaf-like, persistent; filaments short, anthers linear, included; ovulary 3-5-locular containing a single ovule in each cavity; fruit a coriaceous, orange or red drupe containing 2-3 one-seeded nutlets, embryo small.

Key to the Species.

1. Stem slender, hirsute pubescent, $1\frac{1}{2}$ to $3\frac{1}{2}$ feet high; leaves rough pubescent, corolla yellowish. *T. angustifolium*.
1. Stem erect, stout, finely glandular-pubescent, 1 to 3 feet high; leaves soft pubescent, some connate-perfoliate; corolla purple or dull red.

T. perfoliatum.

1. **Triosteum angustifolium** L. Yellow Horse-gentian. Stem slender, very pubescent, 1 to 3 feet high; leaves lanceolate to oblanceolate, acute to long acuminate, $2\frac{1}{2}$ to 5 inches long, $\frac{1}{2}$ to $1\frac{1}{2}$ inches wide, tapering below the middle to an acute sessile base, roughly pubescent; corolla yellowish, about $\frac{1}{2}$ inch long; flowers axillary, solitary. In fertile places. Cuyahoga, Warren, Clermont.

2. **Triosteum perfoliatum** L. Common Horse-gentian. Stems $1\frac{1}{2}$ to $3\frac{1}{2}$ feet high, covered with short glandular hairs; leaves $3\frac{1}{2}$ to $8\frac{1}{2}$ inches long, $1\frac{1}{2}$ to 5 inches wide, ovate to oblong-lanceolate, acuminate, tapering to a narrow base, often somewhat connate, upper surface appressed pubescent to glabrous, lower quite pubescent; flowers not solitary, $\frac{1}{2}$ to $\frac{5}{8}$ inch long, corolla lobes rather large, somewhat spreading; stamens and style moderately exserted; calyx lobes linear, obtuse; fruit an orange-red drupe about $\frac{3}{8}$ to $\frac{1}{2}$ inch long. In rich soil. General.

Linnæa L.

Small creeping rather woody herbs; leaves evergreen, petioled, obovate to orbicular; flowers in pairs, long peduncled, pink or purple, bisporangiate, campanulate to funnelliform, actinomorphic; andrecium pentamerous, united with the base of the corolla, included; ovulary 3-locular, one cavity containing a perfect ovule while the others have several rudimentary ovules; fruit almost globose, containing a single long seed.

1. **Linnæa americana** Forbes. American Twinflower. Branches woody, slender, somewhat pubescent, trailing; leaves $\frac{1}{4}$ to $\frac{1}{2}$ inch long, $\frac{1}{4}$ to $\frac{3}{8}$ inch wide, usually somewhat crenate, slender, petioled, erect; peduncles about 3 inches long, 2-bracteolate at the tip; flowers funnelliform, fragrant, $\frac{3}{8}$ to $\frac{1}{2}$ inch long; ovulary subtended by two glandular ovate scales which often cover the fruit and are attached to it. In cool places. Stark County.

Diervilla [Tourn.] Mill. Bush-honeysuckle.

Shrubs with opposite leaves and yellow cymose or solitary bisporangiate flowers; corolla narrow funnelliform, nearly actinomorphic, base somewhat gibbous; calyx tube slender narrow below; stamens five, anthers linear, ovulary bilocular; ovules many, seed coat minutely reticulate; fruit a glabrous, slender, beaked, septidial, many seeded capsule; embryo minute.

1. **Diervilla diervilla** (L.) MacM. Bush-honeysuckle. A shrub $1\frac{1}{2}$ to 3 feet high; branches glabrous or nearly so, terete usually with two pubescent ridges; leaves short petioled, ovate to obovate, acuminate, irregularly crenate, sometimes slightly ciliate; flowers terminal or in upper axils in 1-5-flowered clusters; corolla about $\frac{3}{4}$ inch long, pubescent, very slightly 2-lipped. In rocky dry woods. Lucas, Lorain, Summit, Wayne, Stark, Franklin.